

U.S. Patent Application Serial No. 10/542,029  
Amendment filed July 23, 2007  
Reply to OA dated February 22, 2007

**AMENDMENTS TO THE CLAIMS:**

Please cancel claims 1 and 13 without prejudice or disclaimer, amend claims 6 and 8-12, and add new claim 14, as follows. This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claims 1-5 (Canceled):

Claim 6 (Currently amended): The method for preparing a tin-containing plating bath according to claim ~~1~~ 14 wherein

at least two sulfur-containing compounds selected from the group consisting of dimethyldisulfide, S-methyl methanethiosulfonate,  $\alpha$ -chlorodimethylsulfone and  $\alpha$ -methylsulfonyl- $\alpha$ , $\alpha$ -dichlorodimethylsulfone are present in the plating bath in an amount of, and  
~~the total content of the sulfur-containing compounds in the plating bath is less than 2 ppm.~~

Claim 7 (Canceled):

Claim 8 (Currently Amended): The method for preparing a tin-containing plating bath according to claim ~~1~~ 14 wherein the purified aliphatic sulfonic acid is ~~one~~ obtained by subjecting ~~an~~

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the aliphatic sulfonic acid produced by hydrolyzing an alkylsulfonyl halide to concentration under reduced pressure while heating.

Claim 9 (Currently Amended): The method for preparing a tin-containing plating bath according to claim + 14 wherein the purified aliphatic sulfonic acid is ~~one~~ obtained by subjecting ~~an~~ the aliphatic sulfonic acid produced by hydrolyzing an alkylsulfonyl halide to solid phase extraction in which the aliphatic sulfonic acid is brought into contact with an adsorbent.

Claim 10 (Currently Amended): The method for preparing a tin-containing plating bath according to claim 9 wherein the purified aliphatic sulfonic acid is ~~one~~ obtained by subjecting ~~an~~ the aliphatic sulfonic acid produced by hydrolyzing an alkylsulfonyl halide to solid phase extraction at least twice, using the same or different kinds of adsorbents.

Claim 11 (Currently Amended): The method for preparing a tin-containing plating bath according to claim + 14 wherein the purified aliphatic sulfonic acid is ~~one~~ obtained by subjecting ~~an~~ the aliphatic sulfonic acid produced by hydrolyzing an alkylsulfonyl halide to a combination of concentration under reduced pressure and solid phase extraction.

Claim 12 (Currently Amended): The method for preparing a tin-containing plating bath according to claim + 14 wherein the alkanesulfonic acid is methanesulfonic acid.

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Claim 13 (Canceled):

Claim 14 (New): A method for preparing a tin-containing plating bath comprising the step of:

dissolving components (a) and (b) in water in such a manner that dimethyldisulfide is present in the bath in an amount of less than 200 ppm, S-methyl methanethiosulfonate is present in the bath in an amount of less than 4 ppm, and  $\alpha$ -methylsulfonyl- $\alpha,\alpha$ -dichlorodimethylsulfone is present in the bath in an amount of less than 4 ppm; wherein

said component (a) comprises a soluble stannous salt, or a mixture of a soluble stannous salt and at least one soluble salt selected from the group consisting of copper salts, bismuth salts, silver salts, indium salts, zinc salts, nickel salts, cobalt salts and antimony salts,

said component (b) comprises a purified aliphatic sulfonic acid obtained by purifying an aliphatic sulfonic acid which has been produced by hydrolyzing an alkylsulfonyl halide, and

the purified aliphatic sulfonic acid is at least one component selected from the group consisting of alkanesulfonic acids and alkanolsulfonic acids.